

Work Order ID 161342

Thursday, May 11, 2017 2:54:19 PM

161342 S/0130782

Page 1

Item ID: 647.3704 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: 204,205,212,214 Cable Cutter System, High
 Start Date: 6/1/2017 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/13/2017 Req'd Qty: 1.00 ***1*** Customer:
 Reference: SCHEDULED/C

Approvals: Process Plan: DAS 21 Date: MAY 11 2017 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.3700	NC3	MAY 15 2017							

100 Document Control 0.00
100 DOCUMENT CONTROL
 DC Memo 0.00
 Doc.Control -USB or Paperwork Photocopy bluefile & type labels per PPP 647.3704

DAS
27
 9-89

JUN 27 2017

110 Pick Kit 0.00
110
 Packaging Memo 0.00
 Packaging

MAY 17 2017

DAS
6
 9-89

DAS
28
 9-89

120 QC4- 100% Inspect kits for completeness 0.00
120
 QC Memo 0.03
 Quality Control

DAS
27
 9-89

JUN 27 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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Item ID: 647.3704 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: 204,205,212,214 Cable Cutter System, High
Start Date: 6/1/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/13/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: _____ Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 647.3704 Location: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.10							
Quality Control									

fs 102

DAS
27
9-89
JUN 27 2017

DAS
21
9-89
JUN 27 2017

DAS
21
9-89
JUN 27 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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161342

647 3704

Required Date: 6/13/2017

Required Qty: 1.00

IPP
IPP REV:C AS

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : _____			

Picklist Print

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Work Order ID: 161342

161342

Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

647.4410

Manufactured No

110

Each

17.0000

1 1

647 4410

Rail

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK081

17

155358

17

647.4010

Manufactured No

110

Each

23.0000

1 1

647 4010

Wiper Deflector RH

DAS
27
9-89

Location

Loc Qty

Loc Code

cck060

23

120740

3

158472

20

647.4011

Manufactured No

110

Each

11.0000

1 1

647 4011

Wiper Deflector LH

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK051

10

155433

10

cck060

1

120741

1

647.4110

Manufactured No

110

Each

5.0000

1 1

647 4110

Doubler

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK080

5

154910

5

647.4111

Manufactured No

110

Each

0.0000

1 1

647 4111

Doubler

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK080

5

154910

5

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Work Order ID: 161342

161342

Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

647.4112

Manufactured No

110

Each

7.0000

1

1

DAS

6

9-89

DAS

28

9-89

647 4112

Clip

DAS

27

9-89

Location

Loc Qty

Loc Code

CCK112

7

154921

7

647.4113

Manufactured No

110

Each

8.0000

1

1

DAS

6

9-89

DAS

28

9-89

647 4113

Clip

DAS

27

9-89

Location

Loc Qty

Loc Code

CCK112

8

154922

8

647.4114

Manufactured No

110

Each

10.0000

2

2

DAS

6

9-89

DAS

28

9-89

647 4114

Shim

DAS

27

9-89

Location

Loc Qty

Loc Code

CCK112

10

120746

5

158414

5

647.4115

Manufactured No

110

Each

10.0000

2

2

DAS

6

9-89

DAS

28

9-89

647 4115

Shim

DAS

27

9-89

Location

Loc Qty

Loc Code

CCK112

10

154293

5

158416

5

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Work Order ID: 161342

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Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

647.4116 Manufactured No

110 Each 16.0000 1 1

647 4116

Shim

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK112

16

121064

4

158848

12

**

MAY 17 2017

DAS
6
9-89

DAS
28
9-89

647.4210 Manufactured No

110 Each 6.0000 1 1

647 4210

Bracket LH

Location

Loc Qty

Loc Code

CCK112

6

155375

6

**

MAY 17 2017

DAS
6
9-89

DAS
28
9-89

647.4211 Manufactured No

110 Each 6.0000 1 1

647 4211

Bracket RH

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK112

6

155386

6

**

MAY 17 2017

DAS
6
9-89

DAS
28
9-89

647.4212 Manufactured No

110 Each 12.0000 1 1

647 4212

Plate

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK112

12

150884

10

m129702

2

**

MAY 17 2017

DAS
6
9-89

DAS
28
9-89

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Work Order ID: 161342

161342

Parent Item: 647.3704

647.3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

647.4311 Manufactured No

110 Each

5.0000

1 1

647.4311

RH Lower Strut

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK073

5

154294

5

**

DAS
6
9-89

DAS
28
9-89

MAY 17 2017

647.4310 Manufactured No

110 Each

15.0000

1 1

647.4310

LH Lower Strut

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK072

15

126395

1

158229

14

**

DAS
6
9-89

DAS
28
9-89

MAY 17 2017

647.4312 Manufactured No

110 Each

7.0000

1 1

647.4312

LH Upper Strut

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK074

7

154503

7

**

DAS
6
9-89

DAS
28
9-89

MAY 17 2017

647.4313 Manufactured No

110 Each

15.0000

1 1

647.4313

RH Upper Strut

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK075

15

154502

7

158436

8

**

DAS
6
9-89

DAS
28
9-89

MAY 17 2017

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Work Order ID: 161342

161342

Parent Item: 647.3704

647.3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149FN832P

Purchased

No

110

Each

2,072.000

34

34

DAS
6
9-89

NAS1149FN832P

Washer

**

MAY 17 2017
DAS
28
0 20

DAS
27
9-89

Location

Loc Qty

Loc Code

GA	358
M135058	208
M136182	40
M136866	110
ST263	1714
M137412	1714

DAS
6
9-89

NAS1149F0332P

Purchased

No

110

Each

2,807.000

157

157

NAS1149F0332P

Washer

**

MAY 17 2017
DAS
28
0 20

DAS
27
9-89

Location

Loc Qty

Loc Code

GA	275
m133709	275
ST260a	1800
m137412	1800
ST262	732
m137075	732

DAS
6
9-89

MS27039-1-07

Purchased

No

110

Each

65.0000

12

12

MS27039-1-07

Screw

**

MAY 17 2017
DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA	48
m137320	48
ST281	17
m135948	17

12

Picklist Print

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Work Order ID: 161342

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Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

110

Each

287.0000

42

42

DAS
6
9-89

MS27039-1-10

SCREW

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

15

m129541

15

ST280

272

m137164

272

MS27039-08-08

Purchased

No

110

Each

183.0000

16

16

DAS
6
9-89

MS27039-08-08

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST278

183

m130325

183

MS27039-1-09

Purchased

No

110

Each

79.0000

14

14

DAS
6
9-89

MS27039-1-09

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

28

18057

28

GA

50

124859

50

ST280

1

m135056

1

MS27039-08-11

Purchased

No

110

Each

281.0000

2

2

DAS
3
9-89

MS27039-08-11

SCREW

DAS
27
9-89

Location

Loc Qty

Loc Code

ST278

281

m135864

31

m137412

250

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Work Order ID: 161342

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Parent Item: 647.3704

647.3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

MS24694-S49

Purchased

No

110

Each

166.0000

1

1

MS24694-S49

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

over006

100

m129499

100

ST284

66

m129702

66

**

MAY 17 2017

DAS

6

9-89

DAS

28

9-89

MS24694-C53

Purchased

No

110

Each

54.0000

8

8

MS24694-C53

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST285

54

m136444

54

**

MAY 17 2017

DAS

6

9-89

DAS

28

9-89

601.3073

Purchased

No

110

Each

0.0000

1

1

601.3073

Connector p/n 082-4440

DAS

27

9-89

will ship at a later date MAY 17-6-26 OK

AN3-4A

Purchased

No

110

Each

41.0000

3

3

AN3-4A

Bolt

DAS
27
9-89

Location

Loc Qty

Loc Code

ST350

41

m136579

41

**

MAY 17 2017

DAS

6

9-89

DAS

28

9-89

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Parent Item: 647.3704

647.3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

AN3-11A Purchased No

110 Each 284.0000 8 8

AN3-11A

Bolt

DAS
27
9-89

Location

Loc Qty

Loc Code

over003

100

m136192

100

ST349

184

153855

184

**

MAY 17 2017

DAS

DAS

28

9-89

AN3C10A Purchased No

110 Each 26.0000 2 2

AN3C10A

Bolt

DAS
27
9-89

Location

Loc Qty

Loc Code

ST349

26

m136983

6

m137321

20

**

MAY 17 2017

DAS

DAS

28

9-89

CR3212-4-2 Purchased No

110 Each 104.0000 5 5

CR3212-4-2

Cherry Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

100

m137164

100

ST320

4

m136321

4

**

MAY 17 2017

DAS

DAS

28

9-89

CR3212-4-3 Purchased No

110 Each 266.0000 17 17

CR3212-4-3

Cherry Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

200

m136741

200

ST320

66

m135408

66

**

MAY 17 2017

DAS

DAS

28

9-89

119017 X13

4

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Work Order ID: 161342

161342

Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-4 Purchased No

110 Each 0.0000

CR3212-4-4

CHERRY RIVET

CCR264SS3-04-89 Purchased No

110 Each 162.0000

CCR264SS3-04

Rivet

Location

Loc Qty

Loc Code

ST321

162

123785

62

m137391

100

CCR264SS-3-03 Purchased No

110 Each 233.0000

CCR264SS-3-03

Cherry Rivet

Location

Loc Qty

Loc Code

FP001

14

m137164

14

LG001

13

m134023

13

ST321

206

m137164

206

CR3213-4-2 Purchased No

110 Each 178.0000

CR3213-4-2

Cherry Rivet

Location

Loc Qty

Loc Code

CCK003

100

m137412

100

ST320

78

m136986

78

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7

12

16

31

31

7

12

16

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Picklist Print

Page 11

Thursday, May 11, 2017 2:54:24 PM

Work Order ID: 161342

161342

Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-3 Purchased No

110 Each

320.0000

24 24

CR3213-4-3

Rivet, Cherry

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

228

m136851

228

GA

92

m136042

92

**

DAS

6

9-89

MAY 17 2017

DAS
28

9-89

CR3213-4-4 Purchased No

110 Each

377.0000

16 16

CR3213-4-4

Rivet, Cherry

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

200

m137391

200

ST319

177

m136301

177

**

DAS

6

9-89

MAY 17 2017

DAS
28

9-89

CR3213-4-5 Purchased No

110 Each

93.0000

28 28

CR3213-4-5

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST319

93

M129913

3

M137361

90

**

DAS

6

9-89

MAY 17 2017

DAS
28

9-89

CR3213-4-8 Purchased No

110 Each

99.0000

4 4

CR3213-4-8

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST319

99

m136983

99

**

DAS

6

9-89

MAY 17 2017

DAS
28

9-89

Thursday, May 11, 2017 2:54:24 PM

Shop Packet Print

Page 11

Picklist Print

Thursday, May 11, 2017 2:54:24 PM

Page 12

Work Order ID: 161342

161342

Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042-3 MS21042L3 Purchased No

110 Each 0.0000

79 79

DAS

MAY 17 2017

MS21042-3

Nut

**

137321 6 9-89

DAS 28 9-89

MS21042-08 MS21042L08 Purchased No

110 Each 0.0000

18 18

DAS

MAY 17 2017

MS21042-08

USE MS21042L08

**

137391 6 9-89

DAS 28 9-89

MS21047L06 Purchased No

110 Each 51.0000

6 6

DAS

MAY 17 2017

MS21047L06

Nut Plate

**

6 9-89

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST301

51

m135671

1

m137166

50

MS21047L08 Purchased No

110 Each 20.0000

6 6

DAS

MAY 17 2017

MS21047L08

Nut Plate

**

6 9-89

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST301

20

m135566

2

m136406

18

MS21047-3 Purchased No

110 Each 97.0000

4 4

DAS

MAY 17 2017

MS21047-3

Nut Plate

**

6 9-89

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST301

97

m137075

97

Thursday, May 11, 2017 2:54:24 PM

Shop Packet Print

Page 12

Picklist Print

Thursday, May 11, 2017 2:54:24 PM

Page 13

Work Order ID: 161342

161342

Parent Item: 647.3704

647 3704

Parent Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017

Required Date: 6/13/2017

Start Qty: 1.00

Required Qty: 1.00

MS21071L3 Purchased No

110 Each 45.0000 4

MS21071L3

ANCHOR NUT

** **DAS 6** MAY 17 2017 **DAS 28**
9-89

DAS 27
9-89

Location Loc Qty Loc Code

ST299 45

125654 45

601.3083 Manufactured No

110 Each 6.0000 1

601.3083

Adhesive Rubber Seal

** **DAS 6** MAY 17 2017 **DAS 28**
9-89

Location Loc Qty Loc Code

cck009 6

157165 2

159136 4

600.1012 Purchased No

110 Each 27.0000 1

600.1012

Sealant PR1425B2 (#654.sem)

** **DAS 6** MAY 17 2017 **DAS 28**
9-89

Location Loc Qty Loc Code

cck017 27

m136838 1

m1370073 4

m137321 8

m137371 14

601.2045 Purchased No

110 Each 10.0000 1

601 2045

RTV (LOCTITE 598) McMaster p/n: 6641A41

** **DAS 6** MAY 17 2017 **DAS 28**
9-89

Location Loc Qty Loc Code

CCK096 2

m136902 2

GA 8

m134260 8

DAS 27
9-89 4/2019

137538

Thursday, May 11, 2017 2:54:25 PM

Shop Packet Print

Page 13



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04881

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/26/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR *[Signature]*

MFG

[Signature]

QC

[Signature]

EFF.

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: DELETED F/N 57, REVISED F/N 6.

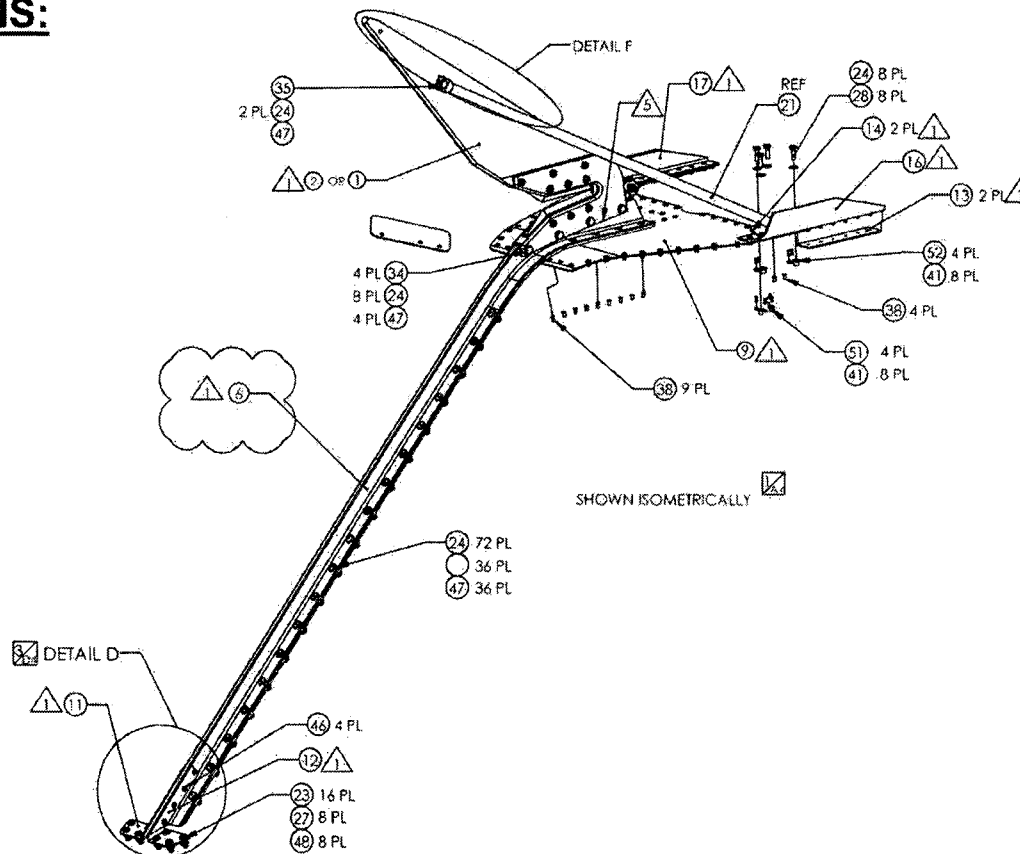
ECR:

N/A

ACTION ITEM:

1.

SHEET 1, ZONE C5 IS:



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 161342 MW
1705-11

57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF			
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY			
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION	MATERIAL	SPECIFICATION	
			QTY							
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED		
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR	☐ YES ☒ NO		



04845

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED
BY:

J. BECKER

DATE: 02/11/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR

MFG

Q	C
---	---

EFF.

NEXT ORDER

TRANSACTION CODES (TC):

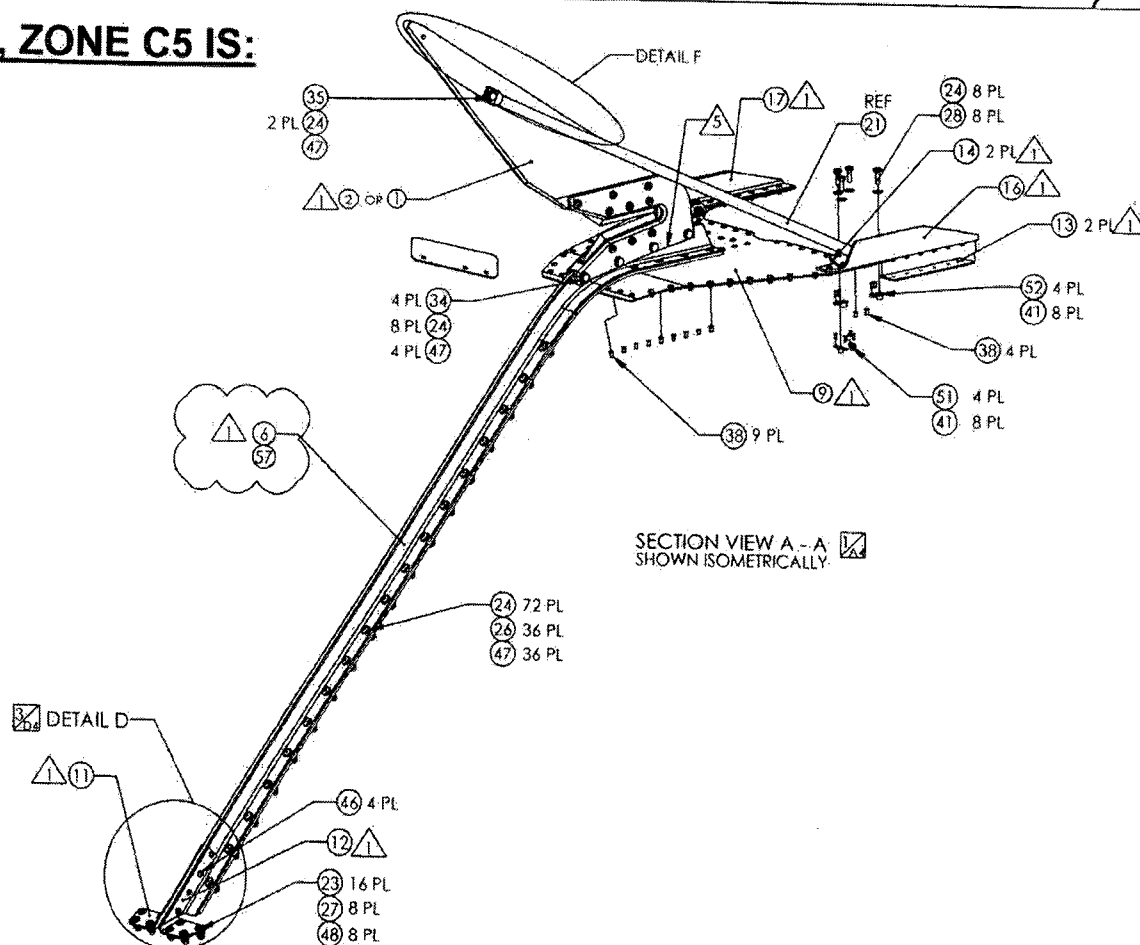
A-ADD
R-REVISE

C-CREATE
D-DELETE

REASON: ADDED F/N 57

ECR:

SHEET 1, ZONE C5 IS:



ACTION ITEM:

1.

57	A	647.3916	1	1	1	1	DEFLECTOR UPPER HALF			
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION		MATERIAL	SPECIFICATION
			QTY							
DOCUMENTS EFFECTED:							☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM		CHANGE CATEGORY	DER REVIEW REQUIRED
							☐ MAJOR ☒ MINOR		☐ YES ☒ NO	

INDUSTRIES, INC.

SHEET 1 OF 1

REV: NC

PREPARED
BY

R. ROSANO

DATE: 12/23/09

EFFECT ON DWG
☐ INC. ☒ UNINC.

APPROVED BY:

ENGR

KMFQ

QC

EFF:

~~NEXT ORDER~~

A-ADD	C-CREATE
R-REVISE	D-DELETE

REASON: ADDED MODEL 214 TO APPROPRIATE DESCRIPTIONS

SHEET 1, ZONE D7 IS:

Is

						647.3704	204, 205, 212, 214 CABLE CUTTERS KIT HIGH				
						647.3703	204, 205, 212, 214 CABLE CUTTERS KIT LOW				
						647.3702	412 CABLE CUTTERS KIT HIGH				
						647.3701	412 CABLE CUTTERS KIT LOW				
					FIND	PART #	DESCRIPTION			MAT'L	SPEC.
						3704	3703	3702	3701		

F/N	TC	PART NUMBER		2901
			QTY	

	QTY	UNIT PRICE	TOTAL
100	100	100	100

DESCRIPTION

MATERIAL

SPECIFICATION

DOCUMENTS EFFECTED:

☒ MDL ☒ INSTALL INSTRUC ☒ ICA ☒ BOM

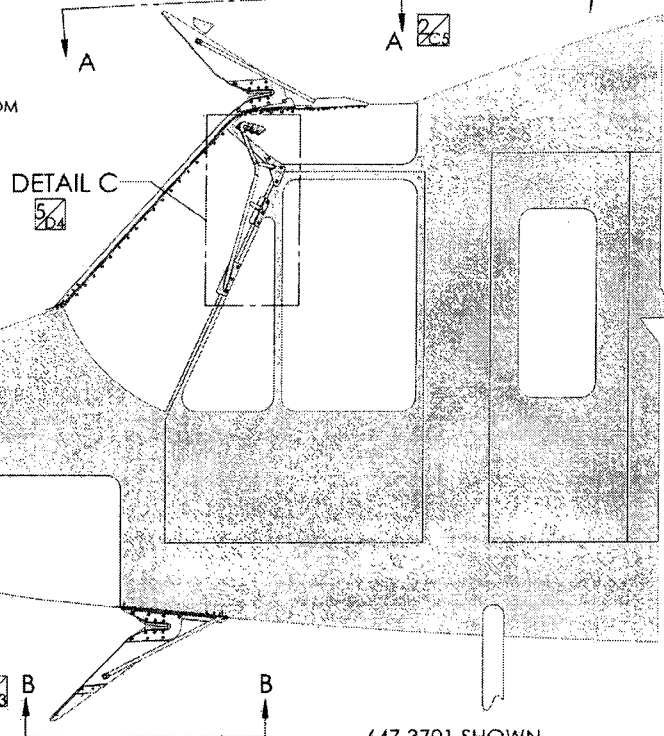
CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☒ YES ☐ NO

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NOTES:

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD, USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER



647.3701 SHOWN

REF	REF	REF	REF	56	647.3701	GPS MOUNT KIT		
A/R	A/R	A/R	A/R	55	601.2045	RTV	LOCTITE 598	
A/R	A/R	A/R	A/R	54	601.1012	SEALANT	PR 1425	
1	1	1	1	53	601.3083	ADHESIVE RUBBER SEAL	CLASS B	
4	4	4	4	52	601.2957	NUTPLATE	MIL-R-3065	
4	4	4	4	51	600.0795	NUTPLATE	MS2107-13	
6	6	6	6	50	601.3066	NUTPLATE	MS21047-3	
6	6	6	6	49	601.3065	NUTPLATE	MS21047-06	
18	18	18	18	48	601.2973	LOCKNUT	MS21042-08	
79	79	79	79	47	601.2943	LOCKNUT	MS21042-3	
4	4	4	4	46	601.2364	CHERRY RIVET	CR3213-4-8	
28	28	42	42	45	601.1183	CHERRY RIVET	CR3213-4-5	
16	16	19	19	44	601.1915	CHERRY RIVET	CR3213-4-4	
24	24	32	32	43	601.0790	CHERRY RIVET	CR3213-4-3	
31	31	13	13	42	601.1039	CHERRY RIVET	CR3213-4-2	
3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

UNINCORPORATED ECN(S)

02728, 04845, 04881

REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION (P/N)		NIC
2	WORK RELEASE	09-25-07	P. BARKO

16	16	16	16	41	601.2207	NUTPLATE RIVET	CR3264SS-3-03	
12	12	12	12	40	601.2491	NUTPLATE RIVET	CR3264SS-3-04	
7	7	4	4	39	601.1066	CHERRY RIVET	CR3212-4-2	
17	17	17	17	38	601.1065	CHERRY RIVET	CR3212-4-3	
5	5	6	6	37	601.1604	CHERRY RIVET	CR3212-4-2	
6	6	6	6	36	601.3082	CHERRY RIVET	CR3212-4-1	
2	2	2	2	35	601.1874	BOLT	AN3C1DA	
8	8	8	8	34	601.2826	BOLT	AN3-11A	
3	3	3	3	33	601.2823	BOLT	AN3-4A	
1	1	1	1	32	601.3073	CONNECTOR	D92-4440	3 2
8	8	8	8	31	601.2419	SCREW	MS2469-AC55	
1	1	1	1	30	601.3070	SCREW	MS2469-4-5-89	
2	2	2	2	29	601.2893	SCREW	MS27039-0811	
14	14	14	14	28	601.3069	SCREW	MS27039-1-09	
16	16	16	16	27	601.2263	SCREW	MS27039-0806	
42	42	42	42	26	601.1365	SCREW	MS27039-1-10	
12	12	12	12	25	601.2198	SCREW	MS27039-1-07	
157	157	157	157	24	601.1607	WASHER	NAS1149F0303P	
34	34	34	34	23	601.2764	WASHER	NAS1149F0305P	
1	1	1	1	22	647.4313	RH UPPER STRUT		
1	1	1	1	21	647.4312	LH UPPER STRUT		
1	1	1	1	20	647.4310	LH LOWER STRUT		
1	1	1	1	19	647.4311	RH LOWER STRUT		
1	1	1	1	18	647.4212	PLATE		
1	1	1	1	17	647.4211	BRACKET RH		
1	1	1	1	16	647.4210	BRACKET LH		
1	1	1	1	15	647.4116	SHIM		
2	2	2	2	14	647.4115	SHIM		
2	2	2	2	13	647.4114	SHIM		
1	1	1	1	12	647.4113	CLIP		
1	1	1	1	11	647.4112	CLIP		
1	1	1	1	10	647.4111	DOUBLER		
1	1	1	1	9	647.4110	DOUBLER		
1	1	1	1	8	647.4011	WIPER DEFLECTOR LH		
1	1	1	1	7	647.4010	WIPER DEFLECTOR RH		
1	1	1	1	6	647.3915	DEFLECTOR		
1	1	1	1	5	647.4410	RAIL		
1	1	1	1	4	647.3804	LOWER CUTTER ASSY HIGH		
1	1	1	1	3	647.3803	LOWER CUTTER ASSY LOW		
1	1	1	1	2	647.3802	212 UPPER CUTTER ASSY		
1	1	1	1	1	647.3801	412 UPPER CUTTER ASSY		
						647.3704	204, 205, 212 CABLE CUTTERS KIT HIGH	
						647.3703	204, 205, 212 CABLE CUTTERS KIT LOW	
						647.3702	412 CABLE CUTTERS KIT HIGH	
						647.3701	412 CABLE CUTTERS KIT LOW	
3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

QTY
NEXT ASSY (S)

ORIGINAL DATE
LAST QTY
DRAWN BY
J. JACOBSON
CHECKED BY
D. BARKO
DRAWING APPROVAL
P. BARKO
DATE
09-25-07
CONTRACT NO.

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300
412 CABLE CUTTERS KIT
REV. 07/24/06
SCALE: NONE
SHEET 1 OF 5

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SECTION VIEW A - A
SHOWN ISOMETRICALLY

DETAIL F
TYPICAL GPS MOUNT KIT INSTALLATION

35 2 PL (24) (47)
1 2 OR 1
34 4 PL (24) 8 PL (47)
1 6
24 72 PL (26) 36 PL (47) 36 PL
46 4 PL (12) 1
23 16 PL (27) 8 PL (48) 8 PL
24 8 PL (28) 8 PL
14 2 PL 1
16 1
13 2 PL 1
52 4 PL (41) 8 PL
38 4 PL
51 4 PL (41) 8 PL
9 1
38 9 PL
56 4 1
REF 1 OR 2
REF 1 OR 2

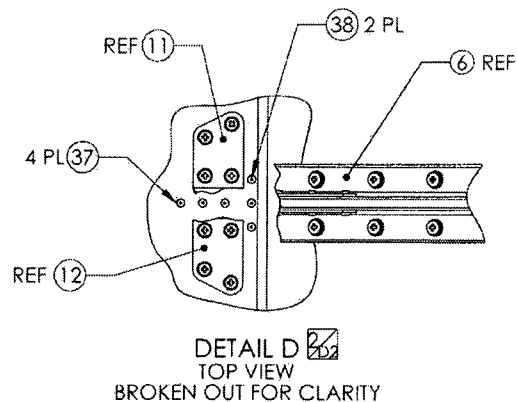
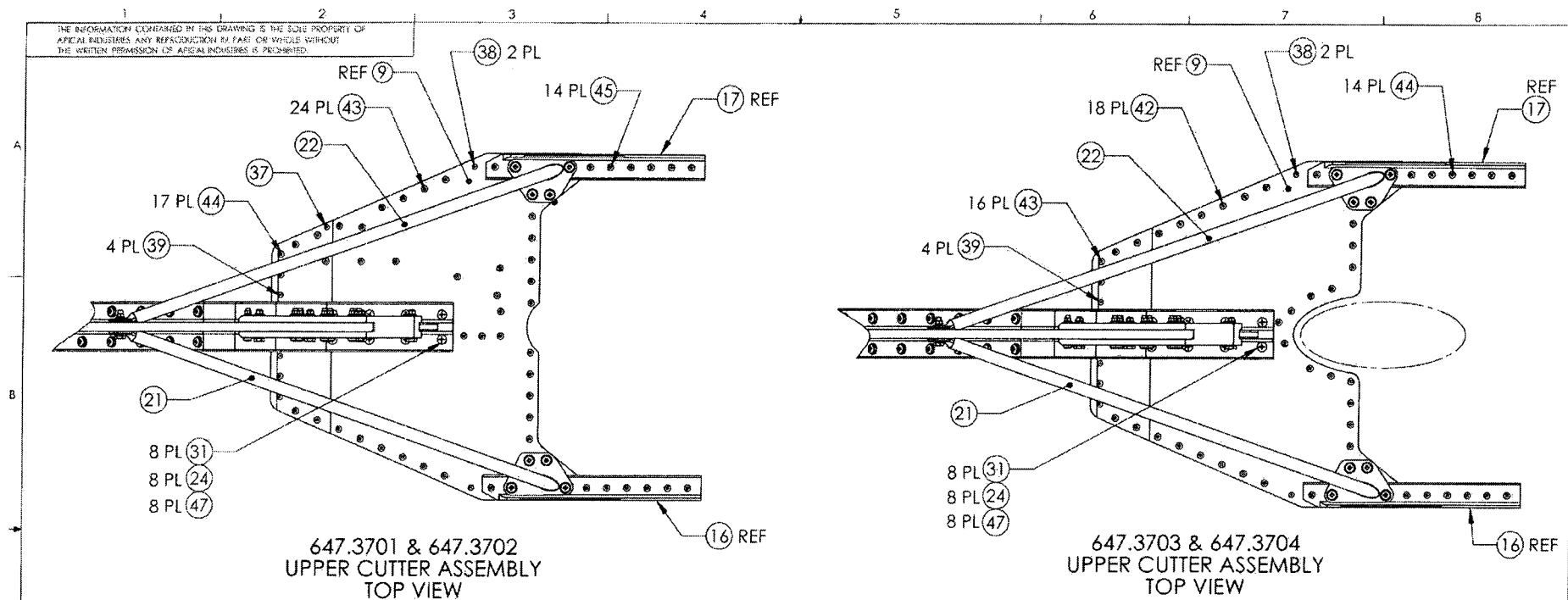
DESIGNED BY: J. J. JACOBSON DRAWN BY: J. J. JACOBSON CHECKED BY: J. J. JACOBSON DATE: 07/12/16		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 774-5300	
PROJECT NO.: DRAWING NO.: 647.3700		412 CABLE CUTTERS KIT	
SCALE: NONE		SHEET 2 OF 5	

SECTION VIEW A - A
SHOWN ISOMETRICALLY

DETAIL F
TYPICAL GPS MOUNT KIT INSTALLATION

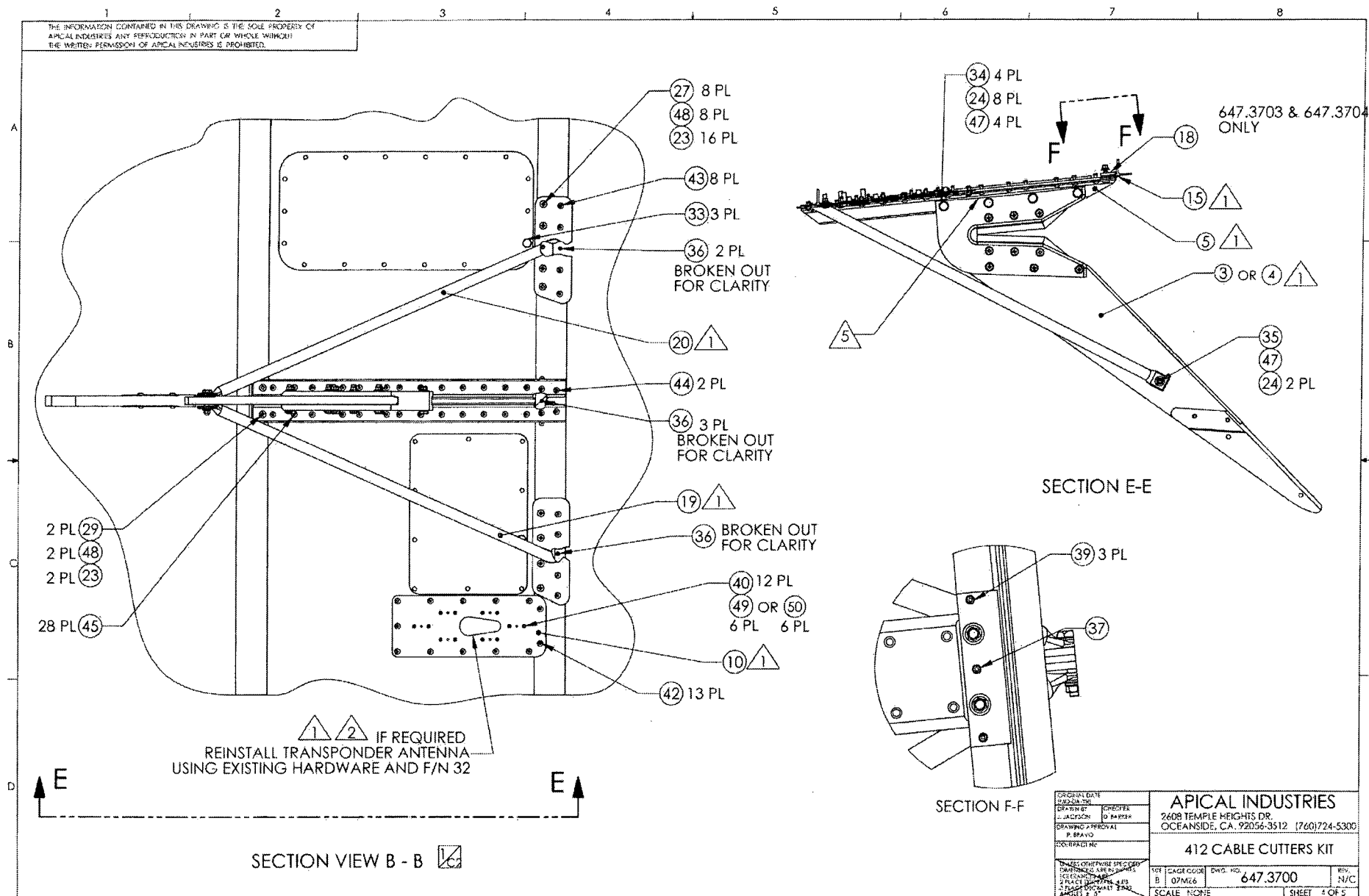
GEORGIA DATE 12/04/04 7:57		APICAL INDUSTRIES	
DRAWING NO. 11-000001 11-000001		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 774-5300	
DRAWING APPROVAL P. E. FAYO		412 CABLE CUTTERS KIT	
2 OF 2 PARTS NO.		412 CABLE CUTTERS KIT	
QUANTITY OVERSHEET SPACE 11-000001 KIT 11-000001 11-000001 KIT 11-000001 11-000001 KIT 11-000001 11-000001 KIT 11-000001 11-000001 KIT 11-000001		KIT # 07/12/06	647.3700
SCALE: NONE		1 SHEET 2 OF 4	

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APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300	
412 CABLE CUTTERS KIT	
DRAWN BY: J. JACKSON CHECKED BY: D. BARTER DRAWING APPROVAL: P. BRAY DATE: 11/11/00	KIT NO.: 647.3700 SCALE: NONE SHEET: 3 OF 5

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THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

BROKEN OUT FOR CLARITY
RH SIDE ONLY

△ LH ⑧
OR
△ RH ⑦

DETAIL C 
LH SHOWN, RH OPPOSITE
2 PL

②⑧ 3 PL
②④ 6 PL
④⑦ 3 PL

⑤③ TRIM TO FIT

②⑥ 3 PL
②④ 6 PL
④⑦ 3 PL

②⑤ 6 PL
②④ 12 PL
④⑦ 6 PL

DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: 07/12/16
SCALE: NONE

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300
412 CABLE CUTTERS KIT
SHEET 5 OF 5

Work Order ID 161342***161342***

Page 1

Thursday, May 11, 2017 2:54:19 PM

Item ID: 647.3704

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: 204,205,212,214 Cable Cutter System, High

Start Date: 6/1/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/13/2017 Req'd Qty: 1.00

1

Customer:

Reference: SCHEDULED/C

Run Start

NR1

Approvals: Process Plan:

Date: MAY 11 2017

Tooling:

Date:

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

647.3700

NC3

MAY 15 2017

100

Document Control

0.00

100

DC

DOCUMENT CONTROL

0.00

Doc.Control -USB or Paperwork

Memo

Photocopy bluefile & type labels per PPP 647.3704

CB

MAY 15 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.03

Quality Control

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SR02289LA

This Certificate issued to:

Apical Industries, Inc. dba Dart Aerospace
3030 Enterprise Court, Suite A
Vista, California 92081

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 29 and CAR 7 of the Federal Aviation Regulations.*

Original Product Type Certificate Number:

Make:

Model:

* See attached FAA Approved Model List (AML)
Number SR02289LA for list of approved aircraft
models and applicable airworthiness regulations.

Description of Type Design Change: Installation of Apical Industries, Inc. Cable Cutters Kit in accordance with FAA approved Apical Industries, Inc. Master Document List MD412-101, Revision A, dated December 23, 2009, or later FAA approved revision.

Limitations and Conditions: This approval requires the inspections and overhaul schedules to be performed as mandated by Apical Industries, Inc.'s Instructions for Continued Airworthiness, ICA412-101, Revision N/C, dated January 5, 2010, or later FAA accepted revision.

This installation should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of the aircraft. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of this permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: September 29, 2009

Date issued: August 7, 2014

Date of issuance: April 27, 2010

Date amended:

By direction of the Administrator



Haifa Haj-Eid
(Signature)
Haifa Haj-Eid
Supervisor, Technical and Administrative
Support Staff
Los Angeles Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.